

**PATENT COOPERATION TREATY**  
**PCT**

**INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY**  
 (Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference <b>PH-2294-PCT2</b>	<b>FOR FURTHER ACTION</b>	
		See Form PCT/IPEA/416
International application No. <b>PCT/JP2004/019259</b>	International filing date ( <i>day/month/year</i> ) <b>22.12.2004</b>	Priority date ( <i>day/month/year</i> ) <b>25.12.2003</b>
International Patent Classification (IPC) or national classification and IPC <b>A61K39/395, A61K47/18, A61K47/10, A61K47/34, A61K9/08, A61K47/12</b>		
Applicant <b>KIRIN BEER KABUSHIKI KAISHA</b>		

1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of <b>7</b> sheets, including this cover sheet.
3. This report is also accompanied by ANNEXES, comprising: <ul style="list-style-type: none"> <li>a. <input type="checkbox"/> (<i>sent to the applicant and to the International Bureau</i>) a total of _____ sheets, as follows:           <ul style="list-style-type: none"> <li><input type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).</li> <li><input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.</li> </ul> </li> <li>b. <input type="checkbox"/> (<i>sent to the International Bureau only</i>) a total of (indicate type and number of electronic carrier(s)) _____, containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).</li> </ul>

4. This report contains indications relating to the following items:
<input checked="" type="checkbox"/> Box No. I Basis of the report
<input type="checkbox"/> Box No. II Priority
<input type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
<input type="checkbox"/> Box No. IV Lack of unity of invention
<input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
<input checked="" type="checkbox"/> Box No. VI Certain documents cited
<input type="checkbox"/> Box No. VII Certain defects in the international application
<input type="checkbox"/> Box No. VIII Certain observations on the international application

Date of submission of the demand	Date of completion of this report
Name and mailing address of the IPEA/JP	Authorized officer
Facsimile No.	Telephone No.

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## Box No. I Basis of the report

1. With regard to the **language**, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.
 

This report is based on translations from the original language into the following \_\_\_\_\_, which is the language of a translation furnished for the purposes of:
 
  - international search (Rule 12.3 and 23.1(b))
  - publication of the international application (Rule 12.4)
  - international preliminary examination (Rule 55.2 and/or 55.3)
2. With regard to the **elements** of the international application, this report is based on (*replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report*):
 

the international application as originally filed/furnished

the description:  
 pages \_\_\_\_\_ as originally filed/furnished  
 pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_  
 pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_

the claims:  
 nos. \_\_\_\_\_ as originally filed/furnished  
 nos.\* \_\_\_\_\_ as amended (together with any statement) under Article 19  
 nos.\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_  
 nos.\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_

the drawings:  
 sheets \_\_\_\_\_ as originally filed/furnished  
 sheets\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_  
 sheets\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_

a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.
3.  The amendments have resulted in the cancellation of:
 

the description, pages \_\_\_\_\_  
 the claims, nos. \_\_\_\_\_  
 the drawings, sheets/figs \_\_\_\_\_  
 the sequence listing (*specify*): \_\_\_\_\_  
 any table(s) related to sequence listing (*specify*): \_\_\_\_\_
4.  This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).
 

the description, pages \_\_\_\_\_  
 the claims, nos. \_\_\_\_\_  
 the drawings, sheets/figs \_\_\_\_\_  
 the sequence listing (*specify*): \_\_\_\_\_  
 any table(s) related to sequence listing (*specify*): \_\_\_\_\_

\* If item 4 applies, some or all of those sheets may be marked "superseded."

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**Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

## 1. Statement

Novelty (N)	Claims	16, 17, 19, 20	YES
	Claims	1-15, 18, 21-23	NO
Inventive step (IS)	Claims		YES
	Claims	1-23	NO
Industrial applicability (IA)	Claims	1-23	YES
	Claims		NO

## 2. Citations and explanations (Rule 70.7)

Document 1: WO 03/18056 A1 (Chugai Seiyaku KK), 6 March 2003, entire document; claims; page 9, line 14 to page 12, line 14; embodiment 1 & EP 1428537 A1 & AU 2002/328593 A1 & US 2004/213785 A1

Document 2: JP 2002-504907 A (Genentech, Inc.), 12 February 2002, entire document; claims; page 13, lines 2 to 25; embodiments & WO 98/56418 A & AU 9882559 B & EP 999853 A1

Document 3: WO 00/66160 A1 (Yamanouchi Pharmaceutical Co., Ltd.), 19 November 2000, entire document; claims; page 5, line 17 to page 9, line 8; embodiment 3 & AU 2000/43149 A & EP 1174148 A1

Document 4: WO 02/96457 A2 (Novartis AG), 5 December 2002, entire document, claims, page 7, line 19 to page 8, line 2; example 4 & EP 1397159 A2 & AU 2002/321055 A1 & US 2004/170623 A1 & JP 2004-532262 A

Document 5: WO 03/68259 A1 (Chugai Seiyaku KK), 21 August 2003, entire document, claims, page 9, line 10 to page 11, line 6; embodiment 1 & AU 2003/211990 A1 & JP 2004-292455 A & EP

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1475100 A1

Document 6: JP 5-65233 A (Mitsui Toatsu Chemicals, Inc.), 19 March 1993, entire document, claims 3 and 4, paragraphs [0017] and [0018], embodiment 2 & WO 92/15331 A1 & AU 9213375 B & EP 531539 A1 & EP 841067 A1 & US 5908826 A

Document 7: WO 01/47554 A1 (Chugai Seiyaku KK), 5 July 2001, entire document, claims; page 14, lines 3 to 24; tables 1, 4 and 5 & AU 2001/22289 A1 & EP 1254666 A1 & US 2003/124119 A1

Document 8: WO 99/37329 A1 (Astra AB), 29 July 1999, entire document, claims, examples & AU 9924448 B

(1)

Documents 1 to 6 set forth a water-based medicinal preparation containing an effective quantity of antibodies for treatment in a buffer solution, and having a pH of 4.0 to 6.0, and in particular an example employing citric acid buffer solution as the aforementioned buffer solution is specifically disclosed. Documents 1 to 6 also specifically indicate that a surfactant such as polyol and/or polysorbate 80 is used as an isotonic agent for sorbitol or the like and is blended in conjunction with this water-based medicinal preparation, or said feature would merely be a feature which a person skilled in the art would be added as a matter of course by a person skilled in the art in the light of these documents.

Therefore the invention set forth in claims 1 to 15, 18 and 21 to 23 is acknowledged to be the same as the

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Box No. V      **Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

invention set forth in one of documents 1 to 6, and therefore lacks novelty and does not involve an inventive step.

(2)

Employing, as the antibodies set forth in documents 1 to 6, existing anti-HLA-DR antibodies or anti-CD40 antibodies, or antibodies prepared by a commonly used means with HLA-D or CD40 as an antigen, is merely a technique which a person skilled in the art could accomplish as necessary, and having in particular HLA-DR antibodies or anti-CD40 antibodies serve as the subject of stabilization is not acknowledged to offer a particular effect.

Moreover, employing glutamic acid, which is a commonly used acidic region buffer agent, as an alternative to citric acid or in addition to citric acid, in any of the inventions set forth in documents 1 to 6, would not require any particular creative skill on the part of a person skilled in the art.

Therefore the invention set forth in claims 16, 17, 19 and 20 does not involve an inventive step in the light of any one of documents 1 to 6.

(3)

Document 7 sets forth a water-based medicinal preparation wherein antibodies to thyroid gland hormone-related peptides are stabilized, and a solution containing a quantity of the aforementioned antibodies effective for treatment in a buffer solution and having a pH which falls within the range of 4.0 to 6.0, and specifically discloses an example using citric acid as a

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buffer solution.

Therefore, in the same way as described in (1), the invention set forth in claims 1 to 15, 18 and 21 to 23 is acknowledged to be the same as the invention set forth in document 7, and therefore lacks novelty and does not involve an inventive step. In addition, the invention set forth in claims 19 and 20 does not involve an inventive step in the light of document 7 for the same reasons as stated in (2) above.

(4)

Document 8 sets forth a water-based pharmaceutical containing a quantity of antibodies effective for treatment in a citric acid buffer solution, and having a pH which falls within the range of 4.0 of 6.0.

Therefore the invention set forth in claims 1 to 5, 7 to 15, 18 and 21 to 23 is understood to be the same as the invention set forth in document 8, and therefore lacks novelty and does not involve an inventive step.

In addition, it would be easy for a person skilled in the art to accomplish the invention set forth in claims 6, 16 and 17 in the light of document 8, and adding commonly used means if necessary, for the same reasons as stated in (2) above, therefore this invention does not involve an inventive step in the light of document 8.

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**Box No. VI      Certain documents cited**

## 1. Certain published documents (Rule 70.10)

Application No. Patent No.	Publication date (day/month/year)	Filing date (day/month/year)	Priority date (valid claim) (day/month/year)
<b>US 2004/33228 A1</b>	<b>19.02.2004</b>	<b>16.08.2002</b>	

**[E, X]**

## 2. Non-written disclosures (Rule 70.9)

Kind of non-written disclosure	Date of non-written disclosure (day/month/year)	Date of written disclosure referring to non-written disclosure (day/month/year)